

ABSTRACT

The invention provides processes for producing hydrogen that include contacting an input gas stream comprising steam and carbon monoxide with water-gas shift catalysts. The water-gas shift catalysts are copper-based catalysts containing low concentrations of platinum group metals. In some embodiments, the processes of the invention are conducted using water-gas shift catalysts having an oxide support on which is dispersed copper or an oxide thereof, a platinum group metal and a reducible metal oxide. In other embodiments, the processes of the invention are conducted with a water-gas shift catalysts having a cerium oxide support on which is dispersed copper or an oxide thereof and a platinum group metal.